

# Tennessee Horseman

Unifying Horse Owners Through  
Science-Based Information



Volume I Issue I; Winter 2016

## Winter Care Checklist

*Dr. Jennie Ivey, PhD, PAS*

*UT Animal Science; Extension Equine Specialist*

As winter weather continues through the early months of the new year, it is important to consider its impact on equine management practices. Often, horses acclimate well to cold temperatures and are typically maintained well outdoors. Special considerations should be given to their nutritional needs and overall maintenance to ensure they maintain adequate health in the winter months.

### Water

Often horses do not drink as often in colder temperatures as in warmer conditions, and decreased water intake can lead to dehydration, reduced feed intake and impaction colic. On average, a 1000 lb horse requires a minimum of 10-12 gallons of water per day. Make sure water is clean, fresh, and unfrozen at least twice daily. Snow and ice is not an adequate water source.

### Feeding and Nutrition

Cold temperatures increase a horse's energy requirements in order to maintain core body temperature. It is best to provide the extra energy to the horse as hay or other forage rather than concentrates, since the amount of heat

produced from fermentation of forages is greater than that produced from digestion of concentrates. Make sure to check horse's body condition score regularly to ensure the winter hair coat is not hiding any excessive weight loss or gain.

### Shelter

A horse's winter hair coat does an excellent job of insulating from the cold winter temperatures. Although they may not choose to seek protection from the elements, horses should have access to shelter to provide protection from wind and other winter weather

conditions. Access to a run-in shed, stable, or even a tree line can provide needed shelter. Make sure all horses in each pasture are able to access shelter and are not excluded based on herd hierarchies.

### Turnout and Exercise

If possible, maintain exercise programs and turnout through winter months. Confinement and limited exercise can lead to respiratory issues, and lower leg edema, or stocking up. Use caution to avoid icy areas. If needed, sand, wood ash or salt can be used to increase traction for safety.

For information on winter weather management, or body condition scoring contact your Extension agent, visit [UTHorse.com](http://UTHorse.com), or contact me at [jzivey@utk.edu](mailto:jzivey@utk.edu) or 865-974-3157.



# Equine Core Vaccination

Dr. Lew Strickland, DVM, MS, DACT  
UT Animal Science; Extension Veterinarian

The American Veterinary Medical Association (AVMA) defines core vaccinations as those that protect from diseases that are endemic to a region, those with potential public health significance, required by law, virulent/highly infectious, and/or those posing a risk of severe disease. There are several diseases that can literally come to see your horse even though your horse may be totally isolated from all others. The following paragraphs will give a brief description of “core” diseases that your horse can be vaccinated against.

## Equine Eastern/Western Encephalomyelitis

Typically, transmission of EEE/WEE is by mosquitoes to horses from wild birds, which serve as natural reservoirs for these viruses. The risk of exposure and geographic distribution of EEE and WEE vary from year-to-year with changes in distribution of insect vectors and reservoirs important in the natural ecology of the virus. Some cases of EEE were reported in late fall of 2015 in South Eastern Virginia, so bird migration and length of the mosquito can play a role in the duration of the disease. WEE has caused minimal disease in horses in the last two decades, however variants that cause clinical disease in equids have been detected in the eastern U.S.

## West Nile Virus

West Nile virus (WNV) is the leading cause of encephalitis in horses in the United States. This virus has been identified in all of the continental United States, most of Canada and Mexico. The virus is transmitted from bird reservoir hosts by mosquitoes to horses. Horses are considered to be dead-end hosts for WNV, so the virus is not directly contagious from horse to horse. Also, indirect transmission via mosquitoes from infected horses is highly unlikely because these horses do not circulate a significant amount of virus in their blood. The case fatality rate for horses exhibiting clinical signs of WNV infection is approximately 33% and horses that survive

the acute illness caused by WNV still exhibit residual effects up to 6 months post-diagnosis. Thus vaccination for West Nile virus is recommended as a core vaccine and is an essential standard of care for all horses in North America.

## Rabies

Rabies is a neurologic disease of horses. Exposure occurs through the bite of an infected (rabid) animal, typically a wildlife source such as raccoon, fox, skunk, or bat. Because of the inquisitive nature of the horse, bites occur most often on the muzzle, face, and lower limbs. The virus migrates via nerves to the brain where it initiates rapidly progressive, invariably fatal encephalitis. While the incidence of rabies in horses is low, the disease is invariably fatal and has considerable public health significance. It is recommended that rabies vaccine be a core vaccine for all equids.

## Tetanus

Tetanus is caused by a potent neurotoxin elaborated by *Clostridium tetani*. *Clostridium tetani* organisms are present in the intestinal tract and feces of horses and spores of *Cl. tetani* survive in the environment for many years. This results in an ever-present risk of exposure of horses wherever they may be. Tetanus is not a contagious disease but is the result of *Cl. tetani* infection of puncture wounds, open lacerations, any exposed tissues such as the umbilicus of foals and reproductive tract of the postpartum mare (retained placenta). All horses are at risk of the development of tetanus, so tetanus toxoid is highly recommended as a core vaccine and should be included in the immunization program for all horses.

## Protocols

Vaccine protocols can vary depending on the type of horse you own (foal, pregnant mare, pasture pet). Working closely with your veterinarian or Extension agent can help you to decide which type of protocol to develop on your farm. If you have any questions please do not hesitate to contact me at 865-974-3538, or [lstrick5@utk.edu](mailto:lstrick5@utk.edu).



## Tipping the Balance in Favor of Your Pastures

*Dr. Gary Bates, PhD  
UT Plant Sciences; Forage Specialist*

One of the major difficulties facing many producers is keeping a good stand of grass and minimizing weeds. There is a basic principle to keep in mind: There is a battle going on between your forage plants and weeds. You need to do things that are going to make your forage plants more competitive, and give them the edge over the weeds.

### Fertilize and Lime Your Fields According to Soil Test Recommendations

Keeping the pH of the soil at 6.0 to 6.5 and providing adequate potash and phosphate will make the clover and grass in the pasture as healthy and competitive as possible, which will improve growth and decrease weed problems. Many times there are weeds in the pasture because of low soil pH or poor fertility, which are environments where many weeds can compete with grasses. If we raise the pH and fertility of the soil, the grass will be strong and not allow weeds to get a foothold.

A key point in all of this is knowing how much lime and fertilizer to apply. The best way to accomplish this is through a soil test. A soil sample taken now and analyzed by the UT Soil, Plant and Pest Center will give you the information needed to apply the proper amounts of lime, potash and phosphate. Contact your local Extension office for more information about soil testing.

### Use Herbicides to Control Weeds

There are many situations that will require a herbicide application to control broadleaf weeds. In order to get effective control, it will be important to select the appropriate herbicide and spray at the appropriate time. Some weeds, such as buttercup and musk thistle, can be controlled easily with a spring application of 2,4-D. Other plants, such as horsenettle or tall ironweed, need stronger herbicides for control. Contact your local Extension office more help identifying weeds and selecting the appropriate herbicide for weed control.

### Use Good Grazing Management

Often the grazing management of a pasture can influence the weed pressure in a field. Every time a plant is grazed, a grass has to use some of its stored carbohydrate reserves to regrow. If the plants are constantly getting grazed without having a chance to replace the reserves, the plant will be weakened and possibly killed. Remember the point of trying to make your forage plants as competitive as possible. One way to do this is to graze the forage, then remove the horses so the grasses have a chance to regrow. Once they have regrown, put the animals back into the field and let them graze. For most cool-season grasses, they should be grazed to about 3 inches. Then they should be allowed to regrow to about 8-10 inches. In good growing conditions, it may only take 3 weeks for the plants to regrow. During hotter conditions, it may take 4-5 weeks. Letting the plants regrow will make them stronger, more competitive, and will allow them to grow at a faster rate.

Contact your local Extension agent for more information on pasture management or visit [UTHorse.com](http://UTHorse.com) for more pasture resources.



# Ring Around the Foot

*Dudley Hurst, Certified Journeyman Farrier  
UT College of Veterinary Medicine; Manager of  
Farrier Services*

The horse's foot is constantly breaking down with various changes in work and environment. Frequently, these changes surprise horse owners and farriers alike to manage the aftermath. Some of these changes in the hoof may be recognized as small vertical cracks, a horizontal crack or horizontal rings around the foot. The horizontal rings around the hoof have various names that you may recognize, including stress, dew, growth, fever, or founder rings. Typically, hoof rings occur due to stress factors and indicate breakdown, yet are one of the best barometers of hoof health and balance.

## Hoof Function

The horse's hoof provides a protective cast around the internal structures and also serves to raise the bony column from receiving direct ground reaction force. This unique adaptation enables a large body mass like a horse to perform more efficiently. When the hoof grows in length, the horse's body weight transfers from the sole and frog to outward the to the hoof wall, and this shift continues as more hoof length is grown. The additional hoof wall strain during this process eventually leads to loading failure and hoof rings to form. The foot will grow to a point of breakdown and reset weight bearing with other hoof structures and the cycle begins again. It is necessary for the hoof to have optimum health to handle this constant cycle of growth and breakdown.

## Cause and Effect

Remember; hoof rings do not originate down on the hoof where they are seen, but rather in the coronary band (hairline of the hoof capsule). Rings are common in all feet; however, concern

should be given to their severity, and if they are concentric or even around the entire hoof capsule. Also, attention is given to determine if rings are present in all four of the horse's hooves, which is often the case.

Hoof rings occur because of the hoof's natural bio-mechanical structure transferring weight bearing; but why? The hoof is the most interactive body part with the environment and is the location of primary loops in the body's circulatory system. Since the hoof is highly

vascular, the hoof can not only reflect changes in the footing and ground moisture, but also changes in systolic blood pressure and nutrition.

In a perfect world the hoof wall would not break down under the pressures of life. Few horses have a foot that does not display horizontal rings mapping events and the lifestyle they lead. It is important to note the frequency or space between rings. Particular attention to severe rings can possibly be a reminder of an event or season, and a chance to alter management practices in the future. Whatever the reason the foot provides a history in the growth rings on many of the factors that influence good hoof health.

## Hoof Care

As a care giver the goal is to keep these rings to a minimum in occurrence and severity. The environment in the southeast, especially Tennessee, is very moist and necessarily means that horses will have softer feet than in other regions of the country. When considering the care program for your horse, use these rings as a guide for future treatment. If the frequency or severity of rings is reduced then you are on the right track. Visit with your farrier, try some of their suggestions and see if you can eliminate some of those nasty rings around your horse's foot.



## Equine Program Updates

### Tennessee Master Horse Program

UT Extension is starting a new, revitalized Tennessee Master Horse Program! Visit [UTHorse.com](http://UTHorse.com) to learn more about upcoming program dates and register for the TMHP mailing list!



### Tennessee Equine Census

Do you own horses, ponies, mules, donkeys or burros? Are you an equine-business owner? UT Extension needs your help! Over the next year, UT Extension will be conducting a survey to determine the impact of the equine industry across Tennessee. Go to [UTHorse.com](http://UTHorse.com) and register for the Tennessee Equine Census and ensure your equids and business are counted!

### Tennessee 4-H Horse Program

The Tennessee 4-H Horse Program offers Tennessee youth with valuable educational opportunities through raising, exhibiting, and judging horses. Participants do not need to own a horse in order to participate in educational events such as horse bowl, hippology and horse judging! Learn how to become involved as a youth participant or adult volunteer through your county Extension agent. To make the best better!



## Horses Should Not Ingest Hay Containing Foxtail

*Dr. Jennie Ivey, PhD, PAS*

*UT Animal Science; Extension Equine Specialist*



Horse owners should check hay for the presence of foxtails before feeding it to their animals. Mouth ulcers, also called hay blisters, can be caused when horses ingest foxtail (*Setaria* species). Foxtail seedheads are green to light green in color, and resemble a bottle brush or a fox tail.

Foxtail does not produce a chemical toxin dangerous to horses, but rather the structure of the plant itself can cause physical harm. Microscopic barbs on the seed heads of stems of foxtail can cause physical trauma to the mouth leading to mouth blisters, irritation to the gastrointestinal tract, and occasionally the horse's skin. The leaves do not cause trauma and can be consumed, but are not recommended forage sources for horses.

Inspection of hay and pastures for seedhead presence is a simple method for prevention. If moderate amounts of foxtail are found in hay, do not feed the bale and remove the remaining hay to prevent consumption. Additionally, monitoring horses' gums and lips for any sores can help detect presence of these species. If ingested for long periods of time, weight loss may occur in addition to mouth ulcers.

Foxtail can be difficult to control. Timely mowing of pastures will help minimize or reduce seed production. Currently there is no herbicide available to remove foxtail or from hayfields or grass pastures; therefore, management to suppress seedhead presence is of great importance. If you suspect your horse is having complications from ingesting foxtail, contact your veterinarian.